SOME ANNECTANT BUGS OF THE SUPERFAMILY CIMICOIDEAE (Heteroptera).

By W. L. McAtee and J. R. Malloch, Washington, D. C.

Those who attempt large things take large risks. This seems to be as true of insect taxonomy as of other affairs. To deal with the major categories of classification before the minor ones are well understood, to say the least, is risky. In the view of the present authors we are now only beginning to realize the vastness of our ignorance of the units of classification, that is species and genera, their enormous number and amazing diversity of structure. So without reflecting at all upon individuals (certain errors being unavoidable in the tasks they undertook), it becomes necessary, from time to time, to point out defects in previous work. This step is inseparable from progress in taxonomy and those who accept their predecessors' findings without verification (merely joining their own contributions to the existing structure) scarcely aid the advancement of science. The only safe building materials in science are verified facts. Assumptions are a prolific source of error and confusion, and their correction or elimination makes more difficult the task of all future workers. With these remarks we plunge into the subjects of this paper.

Miridae: Have been defined as having uniformly three-segmented tarsi. *Peritropis,* an undoubted mirid genus, has (in three species examined) two-segmented tarsi.

Isometopidæ: Have been ascribed three-segmented tarsi and two closed cells in the membrane. All we have examined have two-segmented tarsi and a single cell.

Anthocoridae: A genus here assigned to the family because of preponderance of the evidence, has two-segmented instead of three-segmented tarsi as called for by current definition of the family. If the genus be referred to Microphysidae it does still more violence to diagnoses of that group.

Caution inspired by such flaws in past work causes us to refrain from redefining cimicoid groupings. Annectant forms are known and no doubt others will be discovered that will still further emphasize the intermeshing relationships of these bugs. What should be done in the matter of family and superfamily segregations will be clearer when we know much more in detail about the genera and species. Let the field be cultivated diligently.

With the statement that all of the forms treated in this paper and examined by us have seven visible abdominal segments, metathoracic ostioles, and two-segmental tarsi, we present the following key to the groups without giving opinions based on our studies as to their precise systematic standing.

Key to the groups treated in this paper.

1. Beak three-segmented (Fig. 1); closed cell of membrane emitting two free veins (Fig. 2); ocelli present.
Genus *Idiotropus*

Beak four-segmented; no free veins in membrane 2

2. Ocelli present 3

Ocelli absent; membrane with two closed cells
Genus *Peritropis*

3. Membrane with two closed cells; head porrect (Fig. 4).
Genus *Diphleps*

Membrane with one closed cell; head nearly vertical.
Subfamily *Isometopinae*

Genus *Idiotropus*. Fieb.

The genus described below is either an anthocorid with two-segmented tarsi or a microphysid with three-segmented beak, and complete wings and ocelli in the females. Its affinities seem to lie more with the former than with the latter group, between which it is certainly a conecting link. Reuter cites a genus (*Nabidomorpha* Poppius) of microphysid with three-segmented beak, and the discovery of a microphysid with three-segmented or an anthocorid with two-segmented tarsi (which is not at all beyond expectation) will completely bridge the gap between these segregates.

Generic description. Head porrect, much narrowed in front of eyes, ocelli nearer to eyes than to each other; beak quite stout, three-segmented, the basal and second segments long, third short (Fig. 1), ocelli present; antennae 4-segmented, the segments becoming longer in the following order: 1, 3, 2, 4. Tarsi 2-segmented. General form and venation of fore wing as shown in Fig. 2, the membrane having adjacent to corium a single cell with its sides slightly produced as free veins. This cell is difficult to see except by transmitted light at just the right angle. All specimens seen are females and they are all macropterous both as to tegmina and wings. Venation of hind wing as in Fig. 3.

Idiotropus gagates n. sp.

Female.—Glossy black, a rubiginous substratum showing through especially about the coxae; membrane of fore wings paler than the corium. Antennae, legs and genital segment with short pale hairs. Dorsal aspect as in Fig. 2. Head without shagreening. Pronotum microscopically shagreened posteriorly. Scutellum with minute transverse striae, and a poorly defined broad central elevation. Apex of abdomen slightly truncate in side view, the ovipositor extending to base of truncation. Hind tibia about 1.5 as long as femur, distinctly curved; tarsi short and stout, claws simple, of moderate length. Length, 1 mm., including wings, 1.25 mm.

Plummers Id., Md., June 5, 1903, June 6, 1905, June 6, 15, 1908; and Washington, D. C., June 14; Tampico, Mexico, December 26, E. A. Schwarz (U. S. National Museum).

Genus *Peritropis* Uhler.

This genus has been placed in the Miridae, and assigned by Reuter to his subfamily Cylapina and division Fulviaria. The grounds for these dispositions have not been stated, and indeed they could not have been well considered for the genus is an exception to the definition of the family in that the tarsi in the adults are only two-segmented. *Peritropis* together with the genus *Diphleps* treated further on, go far toward bridging the gap between mirid and isometopid forms. The hypopygial claspers of the ♂ *Peritropis* are symmetrical.

We present below a key to the American species, one of which is described as new. As noted by Reuter the genus *Mevius* Distant (Fauna of British India, Rhynchota II, 1904, p. 453) from Ceylon appears to be a synonym of *Peritropis*.

Key to the Species.

1. First segment of antenna extending distinctly beyond tylus, second with a conspicuous pale yellow basal ring; pronotum with a prominent oblong elevation each side of median line; head with a pair of transverse, black-tipped prominences, simulating ocellar tubercles, near hind margin, and a less prominent pair near front margin of eyes as seen from above; membrane fuscous, pale-dotted, remainder of hemelytron testaceous, variegated with fuscous, a large velvety black spot at inner angle of cuneus. **tuberculatus** n. sp.

First segment of antenna not extending beyond tylus; second very inconspicuously pale at base, not banded; pronotum with less distinct, and head without elevations; membrane uniformly pale fuscous 2

2. Pronotum with more prominent elevations, and the hind margin distinctly sinuate, with three centrally grouped lobules and the lateral portions of hind margin pale; corium fuscous with faint pale dots, especially along the costa.
saldaeformis Uhler

Pronotum with inconspicuous median elevation, the hind margin entire; corium black, copiously dotted with gray.
husseyi Knight

Peritropis tuberculatus n. sp.

To the characters mentioned in key we would add the following: Beak long, overlapping genital cleft of female; second segment of antenna somewhat longer than all the others combined, with 2 pale annuli, one at base, and the other less than half length of segment from base; the first segment is pale, variegated with reddish; the last two are more slender and more hairy than the others. General color of insect testaceous, variegated with fuscous, and tinged here and there with reddish; squarish fuscous markings on costa regularly arranged; venter and legs pale reddish brown, the tibiae with pale annuli, and connexivum with pale blotches. Length: 2.8 mm.

Holotype ♀, Cacao, Trece Aguas, Alta Vera Paz, Guatemala, April 15; allotype ♂, Livingston, Guatemala, May 4, E. A. Schwarz and H. S. Barber. The general coloration of the male somewhat lighter than described for the female but the specimen may not be fully mature. A badly crushed ♀ specimen from the same locality as the holotype, April 5, also has been examined.

The material of *P. saldaeformis* Uhler studied by us has the following data: Bladensburg, Md., July 28, 1890, found on dry branch of tree, a female, which for the reasons that it is in fair condition, has the fullest data, and is one of the specimens most specifically mentioned in connection with the original condition, is chosen as lectotype; a nymph with same data (Uhler informs us these specimens were collected by Otto Heidemann); Illinois, 1 ♂, 1 ♀; Columbus, Texas, June 13; San Diego, Tex., April 18, May 4, E. A. Schwarz. All of the forementioned specimens of *Peritropis* are in the U. S. National Museum.

Of *P. husseyi* Knight, we have examined a paratype female from Washtenaw County, Michigan, August 11, 1920, under bark, R. F. Hussey, kindly loaned by Dr. Knight.

Bibliographical references to the original descriptions are: *P. saldaeformis* Uhler, P. R., Proc. Ent. Soc. Wash., 2 (1890), 1891, pp. 122–123 [" region of Washington," Ill.]; and *P. husseyi* Knight, H. H., Ent. News, 34, No. 2, Feb., 1923, pp. 50–52 [Mich., Ala.].

Genus *Diphleps* Bergroth.[1]

Diphleps Bergroth, E. Notulae Entomologicae, 4, No. 1, March, 1924, pp. 5–7. [Monobasic, genotype *D. unica,* n. sp. Ohio.]

Broad and depressed, the head and thorax (in mounted specimens), and the hemelytra posterior to cuneal fracture, inclined decidedly downward from the plane of corium and scutellum. Head porrect (in plan) deeply inset in anterior part of pronotum (see Fig. 4); ocelli situated at about their own diameters from inner margins of eyes; near hind margin of head; antennae inserted in front of eyes; pronotum depressed within the explanate margins, slightly longitudinally carinate in the middle, the low carina flanked by two oval calloused spots on each side, forming a transverse row across disk; suture between basal and apical moieties of scutellum conspicuous, the former division with a transverse ridge, the latter with a low median carina apically; ostiole present laterad of space between mid and hind coxae. Costa broadly explanate, clavus wider apically than basally; cuneus extending to apex of tegmen; cells of membrane extending almost to apex; venation of hind wing as in Fig. 5. Beak attaining base of abdomen. Femora swollen, especially those of the hind legs which appear fitted for jumping (Fig. 6); hind tibia with microscopic serration. Genital cleft of female dividing all except the two basal segments of venter (Fig. 7).

This genus resembles *Peritropis,* so much so that the presence of ocelli loses its impressiveness as a primary character seg-

[1] We have substituted this name from a paper reaching us after our MS. was submitted for publication, without otherwise altering the text. We have known the genus for four years and we believe that the genus *Teratodia* Bergroth described in the same article (Monobasic, genotype, *T. emoritura* n. sp., Va., pp. 7–8) is based on the male of *Diphleps.*

regating mirid from non-mirid forms. In general build (including the larger group characters), in the structure of antenna, form of thorax, even the texture of chitin and general color scheme the two genera are much alike.

Diphleps unica Bergroth.

General color gray, marbled with fuscous and sparsely marked with black; basal and apical two segments of antenna, and broad annulus on middle of second, black; eyes dark reddish; two spots near inner margins of eyes and apex of tylus fuscous, ocelli and some spots on anterior part of vertex red; mesonotum largely fuscous, apex of scutellum black; a few dashes along costal vein, regularly spaced maculae on costa, and conspicuous dot on inner margin of cuneus blackish or black; membrane closely dotted with pale fuscous; underside rather livid, without distinct markings. Dorsum of head, thorax and coriaceous parts of forewings with regular, decumbent pale scales. Length: 2 mm.

Five females and two nymphs, Urbana, Ill., August 13, 1920, on bark of hackberry; one female Glen Echo, Md., July 17, 1921, on oak, J. R. Malloch. In the case of both these collections there was a growth of lichens on the bark from which the specimens were collected, and the bug may be associated with these plants.

Subfamily *Isometopinae*.

All of the material representing this group studied by us belongs to the U. S. National Museum.

Key to the Genera.

1. Base of scutellum (*i.e.* mesoscutum, exposed by double emargination of the pronotum) with ridges, one on each side, which arise at the anterior angles and run obliquely across, their inner extremities, however, not meeting 2

   Base of scutellum without such ridges (or not so exposed as to show them) 3

2. Head about half as wide as posterior border of pronotum, its lower outline (viewed from the front) rounded, antennal insertions nearer to eyes than to beak; clavus wide posteriorly, much surpassing the almost equilateral, moderately pointed scutellum; eyes almost contiguous in front of ocelli ..... *Heidemannia* Uhler

Head more than half as wide as pronotum, the cheeks lobate below eyes, antennal insertions nearer to beak than to eyes; clavus narrowed posteriorly, but little surpassing the distinctly isosceles and acuminate scutellum; ocelli as well as the eyes widely separated .....*Isometopus* Fieb.

3. Second segment of antenna laminately dilated, wider than length of head; eyes very large and rather close together, the ocelli practically contiguous 4

Second segment of antenna not laminately dilated though it may be thickened 5

4. Second segment of antenna about four times as long as first, gradually widened from base; first segment much shorter than width of head, globose, without spurs
Sophianus Distant

Second segment of antennae scarcely three times as long as first, deeply scooped out, husk-like, the convex anterior side and the margins with many long pale hairs; first segment as long as width of head, thick, with a stout spur above and another below (Fig. 16) .....**Alcecoris** n. g.

5. Pronotum with the lateral carina obsolete anteriorly but distinct and sharp posteriorly 6

Pronotum with a sharp carina from anterior to posterior margin 7

6. Pronotum without transverse impression; scutellum in general moderately inflated, the apex rounded, prominent; front not produced downwardly .....*Lidopus* Gibson

Pronotum with a deep transverse impression just in front of hind margin; scutellum with a conspicuous semi-globular elevation posteriorly; front produced downwardly past base of beak (Fig. 14) .....**Wetmorea** n. g.

7. Head higher than wide, only about half as wide as hind margin of pronotum; apical segment of antenna ovoid, much shorter than subapical segment .... *Myiomma* Puton

Head wider than high, more than half as wide as hind margin of pronotum; apical and subapical segments of antenna similar in form and length.
Corticoris McAtee and Malloch

Isometopus Fieb

Isometopus Fieber, F. X. Wien. Ent. Monatschr., 4, No. 9, Sept., 1860, p. 259, pl. vi, a. [Two species included: *Acanthia intrusa* H. S., and *I. alienus* n. sp., of which the former was

named as type by Distant, Fauna British India, Rhynchota, II, 1904, p. 484].

Genus *Isometopus* Fieb.

Cephalocoris Stein, J. P. C. F. Berlin. Ent. Zeitschr., 4, 1860, p. 79 [Monobasic, *Acanthia intrusa* H. S., Genotype. Europe]. This name published in the first installment of the Zeitschrift (apparently published in two parts (this year certainly)) antedates *Isometopus* Fieber published in September of the same year. It is, however, preoccupied by Heer's genus of the same name (1853) so that *Isometopus* must be used.

Turnebus Distant, W. L. The Fauna of British India. Rhynchota, II, 1904, p. 485, fig. 318. [Monobasic, *T. cuneatus* new species, Ceylon.] So far as we can judge from the description and figure of *Turnebus* it does not deserve to be separated from *Cephalocoris.*

Genus *Myiomma* Puton.

Myiomma Puton, A. Pétites Nouvelles Entomologiques, 4, No. 44, Jan. 15, 1872, p. 177. [Monobasic, genotype, *M. fieberi,* new species, France.] A figure is published in Ann. Soc. Ent. France, 5e ser., 3, 1873, pl. 1, fig. 3, from which we draw the characters used in our key.

Genus *Heidemannia* Uhler.

Heidemannia Uhler, P. R. Proc. Ent. Soc. Wash., 2, No. 1, 1890 (1891), pp. 119–121, Fig. 7. [Monobasic, genotpye, *H. cixiiformis* new species, Maryland, Virginia.] We are unable to concur in synonymizing this genus with *Myiomma* Puton. Its almost holoptic condition is sufficient to distinguish it from the latter genus, even if the character used in our key (and applied to *Myiomma* on the basis of a figure only) should prove illusory. We are not unmindful of what Reuter said on this subject (Hemip. Miscel., 1912, pp. 27–28) but think we can rely on the figure prepared by Puton for the foregoing conclusions. That figure represents a ♂ which has the ocular structure generically distinct from *Heidemannia*; certainly the ♀ from which the genus was described would not have larger eyes than the male; *Heidemannia* is nearly holoptic in both sexes.

A locality record not previously published is Jackson's Id., Md., July 3, 1911, P. R. Myers. A note giving, more definitely than has previously been done, the habitat of this insect may not be out of order. McAtee collected two specimens, the present location of which is unknown, at Plummers Island, Md., in shady woods, on barkless surface of a hackberry limb or bole about 3 to 4 inches in thickness. Most of the surface of this wood was covered by a thin velvet-like growth of fungus, with which the insects may have been associated.

Head of *cixiiformis* from above as in Fig. 8, tarsal claws as in figure 9. Venation of hind wings differs from that of *Corticola* (Fig. 5) in the anterior apical vein emitted from discal cell bending forward and entering the costal margin about midway to apex of wing, and the discal cell being much narrower at apex.

Sophianus Distant, W. L. The Fauna of British India, Rhynchota, II, 1904, pp. 485–486, Fig. 319. [Monobasic, genotype, *S. alces* new species, Ceylon.]

Genus *Sophianus* Distant.

Lidopus Gibson, E. H. Bul. Brooklyn Ent. Soc., 12, No. 4, Oct., 1917, p. 74. [Monobasic, genotype, *L. heidemanni* new species, Texas.]

Key to the Species.

Second segment of antenna twice as long as third and fourth together; thickness of head about one-third its height; pronotum with numerous coarse, non-setigerous punctures; pronotum black, head and tegmen fuscous; tip of scutellum ivory; anterior half of cuneus white (Texas).

heidemanni Gibson

Second segment of antenna distinctly less than twice as long as third and fourth together; thickness of head about one-half its height; pronotum with fewer, and finer, setigerous punctures. Color pattern about the same as in *heidemanni*. Length, 2 mm. ♀ Cacao Trece Aguas, Guatemala, April 20, E. A. Schwarz and H. S. Barber.

schwarzi n. sp.

Genus *Corticoris* McAtee and Malloch.

Corticoris McAtee, W. L., and Malloch, J. R. Proc. Biol. Soc. Wash., 35, p. 95, Aug. 30, 1922. [New name for *Isometopus* of

American authors not of Fieber, orthotype, *I. pulchellus* Heidemann.]

Dendroscirtus Bergroth, E. Notulae Entomologicae, 4, No. 1, March, 1924, p. 4. A substitute for *Corticoris* McAtee and Malloch condemned as a hybrid name. No code of nomenclature recognizes such name tinkering. A name is a name, otherwise what becomes of all the generic names adapted from the barbarous languages, including such personal dedications as Bergrothia, Rothbergia and the like?

A key to the species is given below but the only further annotations are a few locality records heretofore unpublished. All of the species except *Myiomma media* Gibson were described from female specimens exclusively; the material for *media* was a single male collected at the same time and place as the females of *unicolor* Heidemann. We have found a specimen bearing the same relation to *pulchellus* that *media* does to *unicolor,* and we believe we are safe in associating these as the males of the two species respectively. The males have more ample tegmina and wings than the females making their size as indicated by measured length greater than that of the females which, however, they do not exceed in bulk of body; the characters used to identify them in the key result from the greater development of eyes and ocelli, a common characteristic of male insects.

Fore wing as in figure 10; abdomen of ♀ as in figure 11.

Key to Species.

1. Eyes relatively smaller, their lower margins not forming arcuations in lower outline of head as viewed from in front; space between lower margin of eye and upper border of antennal socket wider than thickest part of second antennal segment. Females 2

   Eyes relatively larger, their lower margins forming distinct arcuations in lower outline of head as viewed from in front; space between lower margin of eye and upper border of antennal socket much narrower than thickest part of second antennal segment. Males 5

2. Face decidedly gibbous below, outline of head viewed from in front more rounded triangular (almost elliptical); space between lower margin of eye and antennal socket entirely black 3

   Face less gibbous below, outline of head viewed from in front more angularly triangular; space between lower margin of

eye and antennal socket bicolored, whitish posteriorly, dark anteriorly 4

3. Narrowest part of space between eyes wider than one eye; facial convexity not evenly rounded as seen from above, having a shallow depression on each side near eye; pronotum (except posterior angles) and scutellum piceous; base and apex of clavus, and oblique marking across corium and cuneus fuscous, margin of head, antennae, and legs chiefly pale (*Isometopus signatus* Heid.)
♀ *signatus* Heidemann.

Narrowest part of space between eyes distinctly narrower than one eye (Fig. 12); facial convexity evenly rounded from eye to eye as seen from above; hemelytron except basal half and extreme apex of clavus, and dot at inner angle of cuneus, whitish to cream color; scutellum, thorax, and head piceous; beak, legs, and antennae chiefly pale.
(*Isometopus pulchellus* Heid.) ♀ *pulchellus* Heidemann.

Pronotum and scutellum piceous, hemelytra fuscous; margin of head, a streak on upper surface and the apex of second antennal segment and apices of femora and tibiae pale. (Ariz.) (*Isometopus unicolor* Heid.) .
♀ *unicolor* Heidemann.

Pronotum black on anterior, yellowish on posterior half; hemelytron yellowish, with a faint brown mark on middle of clavus, and a large dark brown mark extending obliquely from middle of corium backward to its apex, but which does not reach the inner margin until beyond apex of scutellum, and falls short of cuneus; the apex of latter dark brown, membrane fuscous hyaline (*Isometopus libertus* Gibs. N. Mex., may be only a color variety of *unicolor*) ..... ♀ *libertus* Gibson.

5. Ocelli conspicuous; when seen from in front the ocellar elevations are separated by not more than the width of one of them (Fig. 13); scutellum, adjacent parts of clavus, and parts anterior fuscous, hemelytra yellowish brown, cuneus and inner angle of corium infuscated (Ariz., *Myiomma media* Gibson) ..... ♂ *unicolor* Heidemann.

Ocelli smaller; when seen from in front the ocellar elevations are separated by about twice the width of one of them (Fig. 12); hemelytra whitish hyaline the cuneus infuscated ..... ♂ *pulchellus* Heidemann.

I. pulchellus Heidemann.—Plummers Id., Md., May 29, 1914, at light, R. C. Shannon; Bedford County, Pa., Aug. 24.

I. signatus Heidemann.—Victoria, Tex., April 4; Goliad, Tex., April 18, 19, E. A. Schwarz; Beeville, Tex., April 22; Washington, D. C., July 29 (Uhler collection).

Genus **Wetmorea** n. gen.

It should be noted that the characters mentioned in the key are not repeated here. In order to place the genus in the key an assumption was made as to the nature of antenna. They are lost in the single specimen examined which is otherwise damaged, but which nevertheless shows sufficiently the characters of a highly distinct new genus. Head viewed from in front longer than wide, the front projecting downward as a broadly rounded lobe entirely concealing clypeus and beak from this view (Fig. 14–15). From the side, therefore, one can see a posteriorly facing surface of the front, a very rare thing indeed in insects. The antennal insertions adjoin lower margins of eyes. Eyes well separated, frons with a shallow median groove between them, ocelli near inner margins of eyes, which are emarginate just behind them. Pronotum inflated in front above level of vertex, the sides flaring abruptly behind transverse impression, the hind margin broadly and deeply emarginate, exposing ample base of scutellum; the scutellum proper margined all around, the apex rounded. Beak somewhat overlapping genital segments.

Named for Dr. Alexander Wetmore, the collector. Genotype, the following species.

Wetmorea notabilis n. sp.

General color fuscous, the posterior margin of pronotum narrowly pale, and polished spot posterior to inner angle of cuneus white. Frons with some long, and margins of head behind eyes, with short dark bristles. Length, 2 mm. Holotype, ♀ Dragoon Mts., Ariz. (Cochise Stronghold, 5,000 ft.), July 16, 1919, Alexander Wetmore.

Genus **Alcecoris** n. gen.

Head a fourth longer than wide as viewed from in front (Fig. 16); the extraordinary antennae described in key furnish the principal generic characters, no 3rd and 4th segments are present in the single specimen at hand so their structure is unknown; the great size of the antenna apparently has required special developed of supporting structures, the front is bounded on each side by ridges converging at

almost right angles at bases of antennae and there is a well developed pointed tubercle behind each antennal insertion just below eye.

Fully one-third the height of head stands clear above juncture with pronotum, the latter with well developed collum and complete lateral carinae which are somewhat explanate at posterior angles. Pronotum and basal part of scutellum conjointly inflated, posterior part of scutellum moderately sloping, with a subapical polished knob, and a carinate margin which is slightly raised apically. Beak short, not surpassing the rather elongate front coxae. Second sternite of abdomen longer than next three combined. Genotype, the following species.

Alcecoris periscopus n. sp.

Head, antennae and pronotum fuscous, the eyes reddish brown with dark blotches. Posterior moiety of scutellum orange brown, the subapical callosity white; clavus and corium with numerous punctures bearing rather long dark hairs; a dusky blotch on corium above middle of clavus, another near apex on costa, and a larger orange-brown spot near inner angle; cuneus black, with a larger and a smaller white spot; membrane blackish. Length, 2.5 mm.; the first and second antennal segments together 1.5 mm. ♀ Timor, on orange tree, Geo. Compere.

Bibliography.

Following are a few citations that may be useful to students of Isometopinae.

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The Fauna of British India. Rhynchota.

In Vol. II, 1904, p. 480 is described the genus *Bilia* (monobasic, genotype *B. fracta* n. sp., Ceylon) which looks like an Isometopid, but nothing is said of ocelli.

In Vol. V, 1910, pp. 293–294, is described the genus *Jehania* (monobasic, genotype *J. mahal* n. sp., India.)

Rhynchota Malayana, Part III.

Records of the Indian Museum, 5, 1910, p. 315.

Skapana new genus, monobasic, genotype, *S. typica* n. sp. Borneo.

Kirkaldy, G. W.

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Proc. Linn. Soc. New South Wales, 32, 1907, p. 784.

Eurocrypha new genus, monobasic, genotype, *E. thanatochlamys* n. sp., Australia.

A catalogue of the Hemiptera of Fiji.
Proc. Linn. Soc. New South Wales, 33, Pt. 2, August, 1908, pp. 375–376.
Nesocrypha corticicola new genus and species described.

Poppius, B.

Sur Kenntnis der Miriden, Isometopiden, Anthocoriden, Nabiden und Schizopteriden Ceylon's.
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Isometopidae lieweni new genus and species described.

H. Sauter's Formosa-Ausbeute; Nabidae, Anthocoridae, Termatophylidae, Miridae, Isometopidae und Ceratocombidae (Hemiptera).
Arch. f. Naturgesch., 80, Abt. A, H. 8, March, 1915, pp. 75–76.
Turnebiella pallipes new genus and species described, and
Paloniella new genus proposed for *Isometopus feanus* Distant.

Explanation of Plate.

Fig. 1. *Idiotropus gagates,* beak.
Fig. 2. *Idiotropus gagates,* entire insect from above.
Fig. 3. *Idiotropus gagates,* hind wing.
Fig. 4. *Diphleps unica,* entire insect from above.
Fig. 5. *Diphleps unica,* hind wing.
Fig. 6. *Diphleps unica,* hind leg.
Fig. 7. *Diphleps unica,* abdomen of ♀ ventral view.
Fig. 8. and 8a. *Heidemannia cixiiformis,* head from side and from above.
Fig. 9. *Heidemannia cixiiformis,* hind tarsal claws.
Fig. 10. *Corticoris unicolor,* fore wing.
Fig. 11. *Corticoris pulchellus,* apex of abdomen of ♀ from below.
Fig. 12. *Corticoris pulchellus,* head of ♀ from above.
Fig. 13. *Corticoris unicolor,* head of ♂ from above.
Fig. 14. *Wetmorea notabilis,* head and thorax from side.
Fig. 15. *Wetmorea notabilis,* head from in front.
Fig. 16. *Alcecoris periscopus,* head and antennae from in front.
Fig. 17. *Alcecoris periscopus,* second antennal segment from behind.
Fig. 18. *Microphysa tenella,* fore wing.
Fig. 19. *Microphysa tenella,* beak.
Fig. 20. *Microphysa tenella,* hind leg.